FIG.1

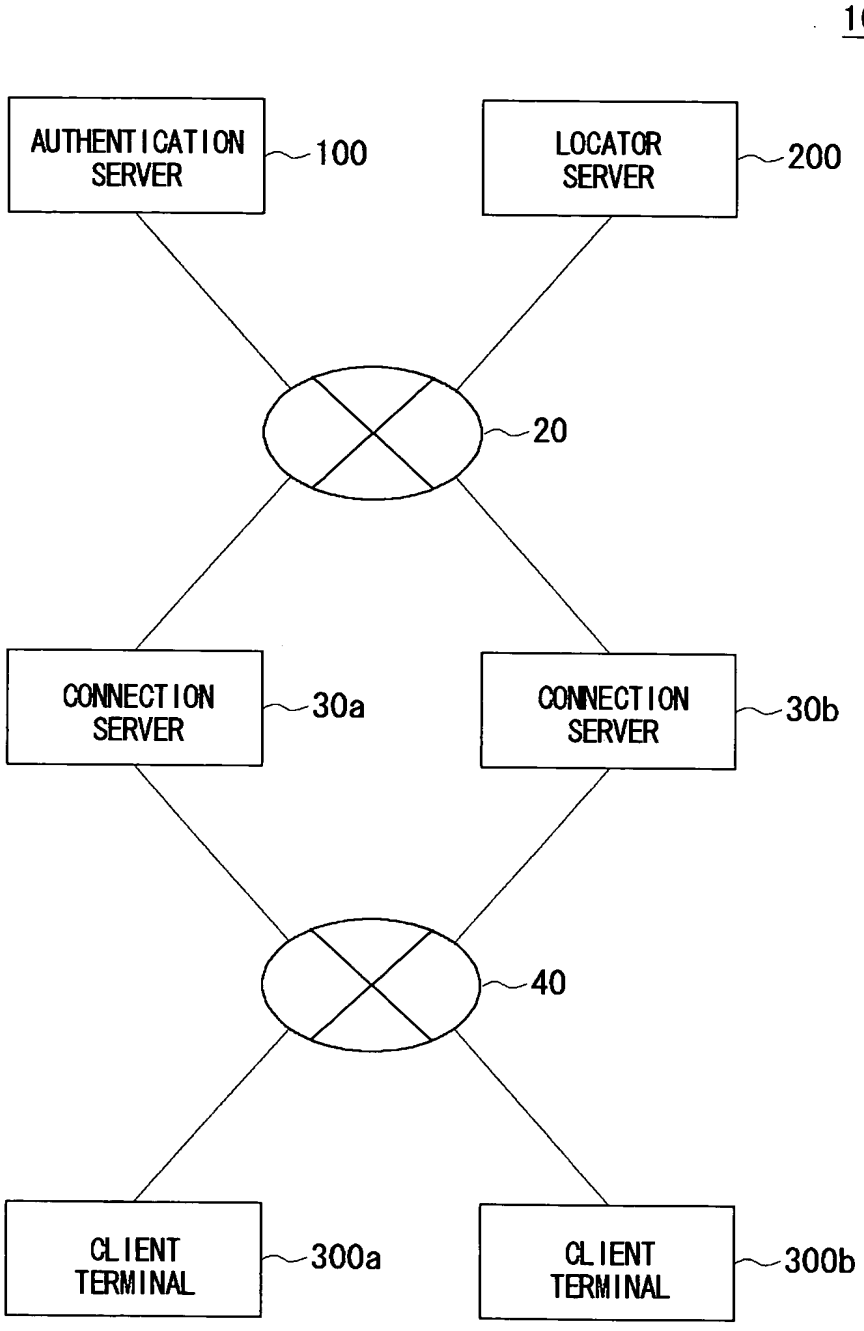

10
AUTHENTICATION SERVER
100
LOCATOR SERVER
200
20
CONNECTION SERVER
30a
CONNECTION SERVER
30b
40
CLIENT TERMINAL
300a
CLIENT TERMINAL
300b

FIG.2

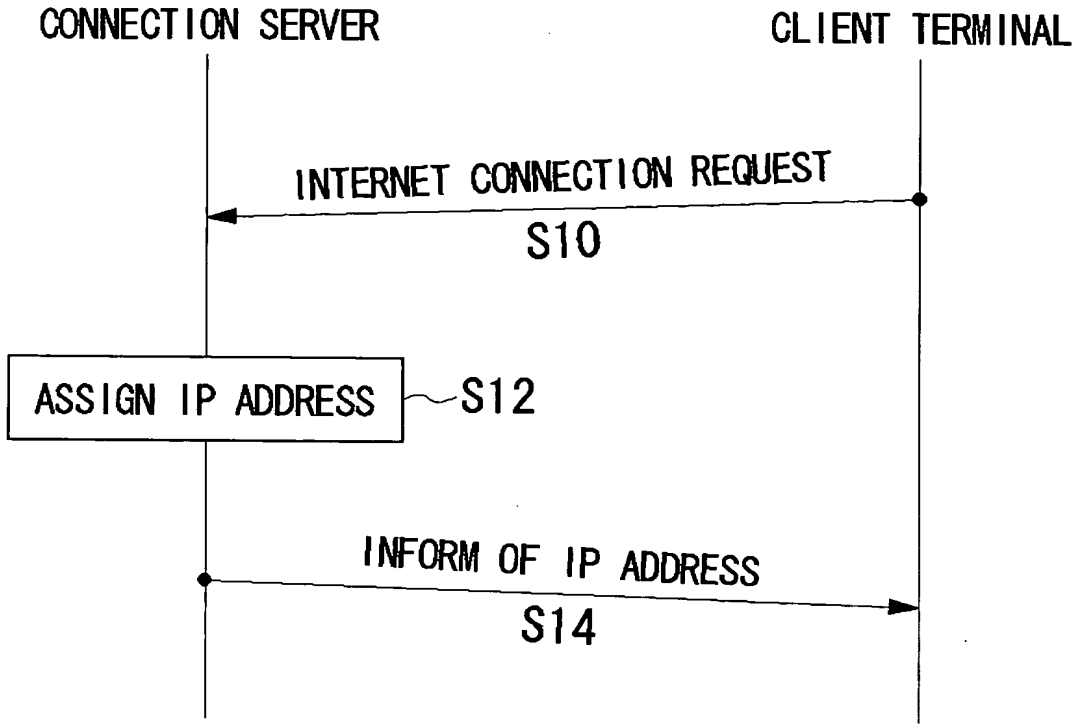

CONNECTION SERVER
CLIENT TERMINAL
INTERNET CONNECTION REQUEST
S10
ASSIGN IP ADDRESS
S12
INFORM OF IP ADDRESS
S14

FIG.3

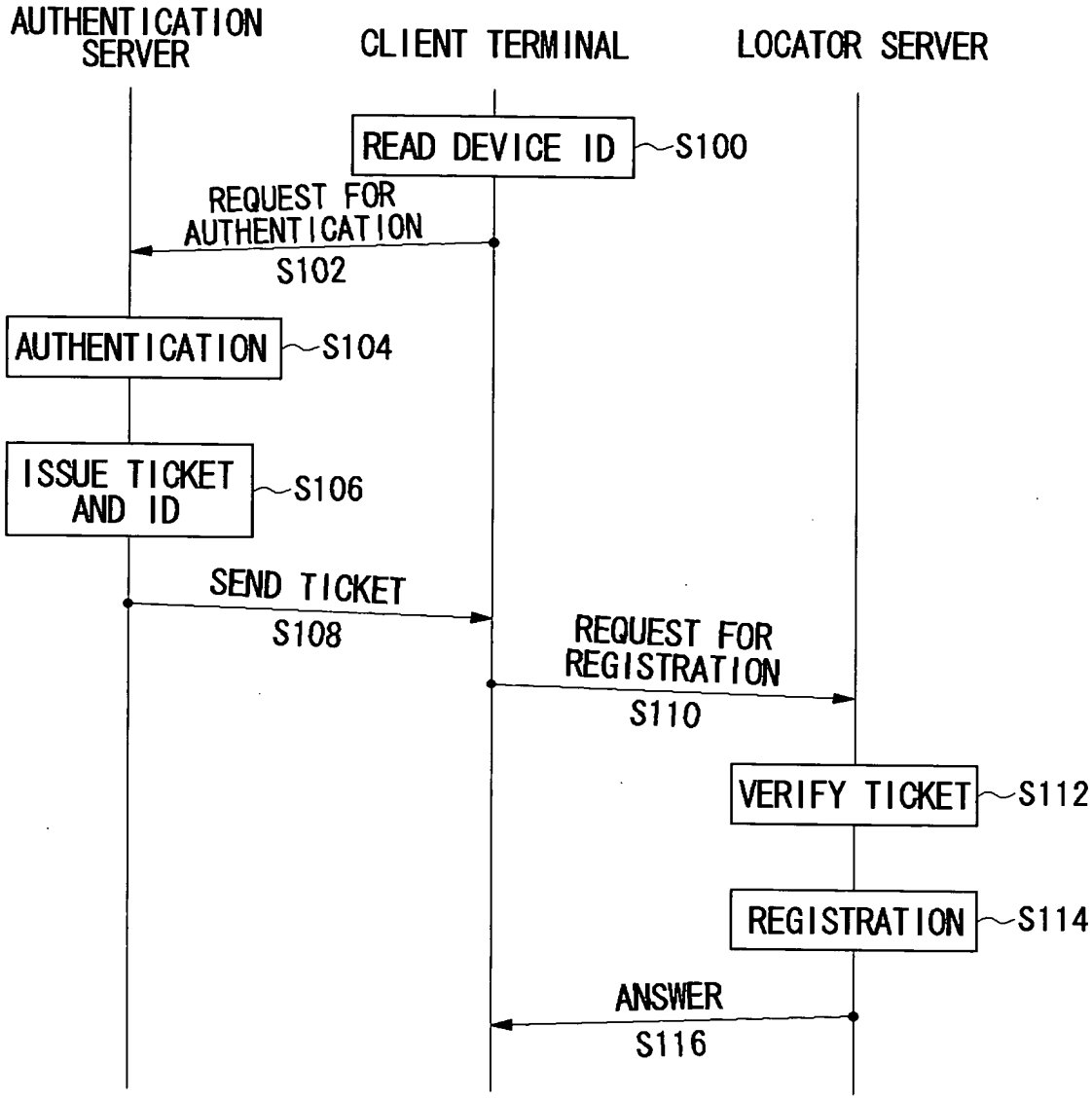

AUTHENTICATION SERVER
CLIENT TERMINAL
LOCATOR SERVER
READ DEVICE ID
S100
REQUEST FOR AUTHENTICATION
S102
AUTHENTICATION
S104
ISSUE TICKET AND ID
S106
SEND TICKET
S108
REQUEST FOR REGISTRATION
S110
VERIFY TICKET
S112
REGISTRATION
S114
ANSWER
S116

FIG.4

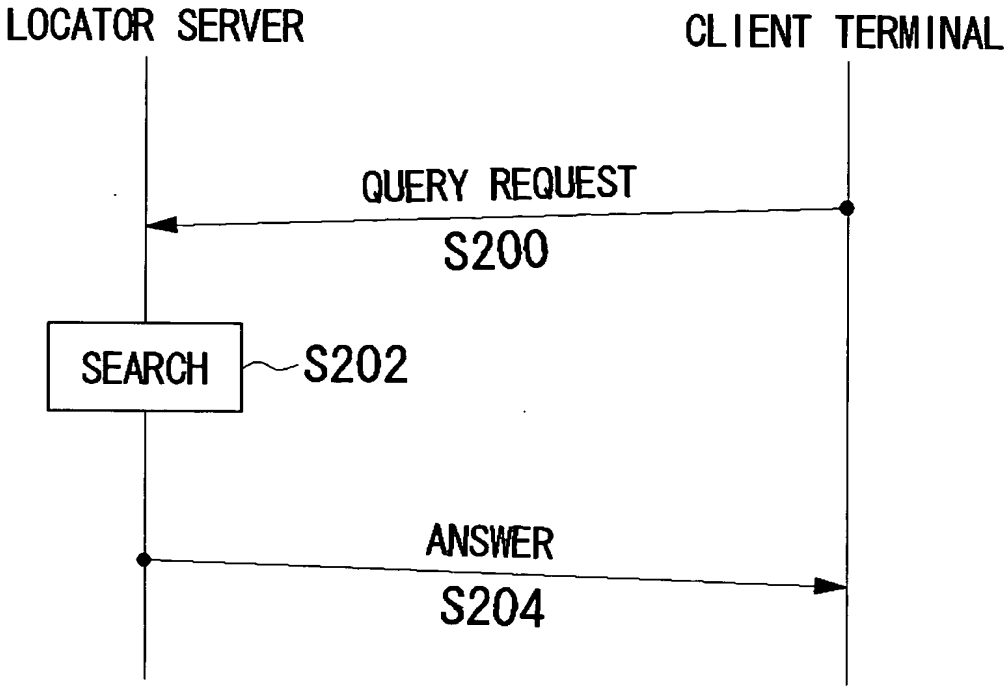

LOCATOR SERVER
CLIENT TERMINAL
QUERY REQUEST
S200
SEARCH
S202
ANSWER
S204

FIG.5

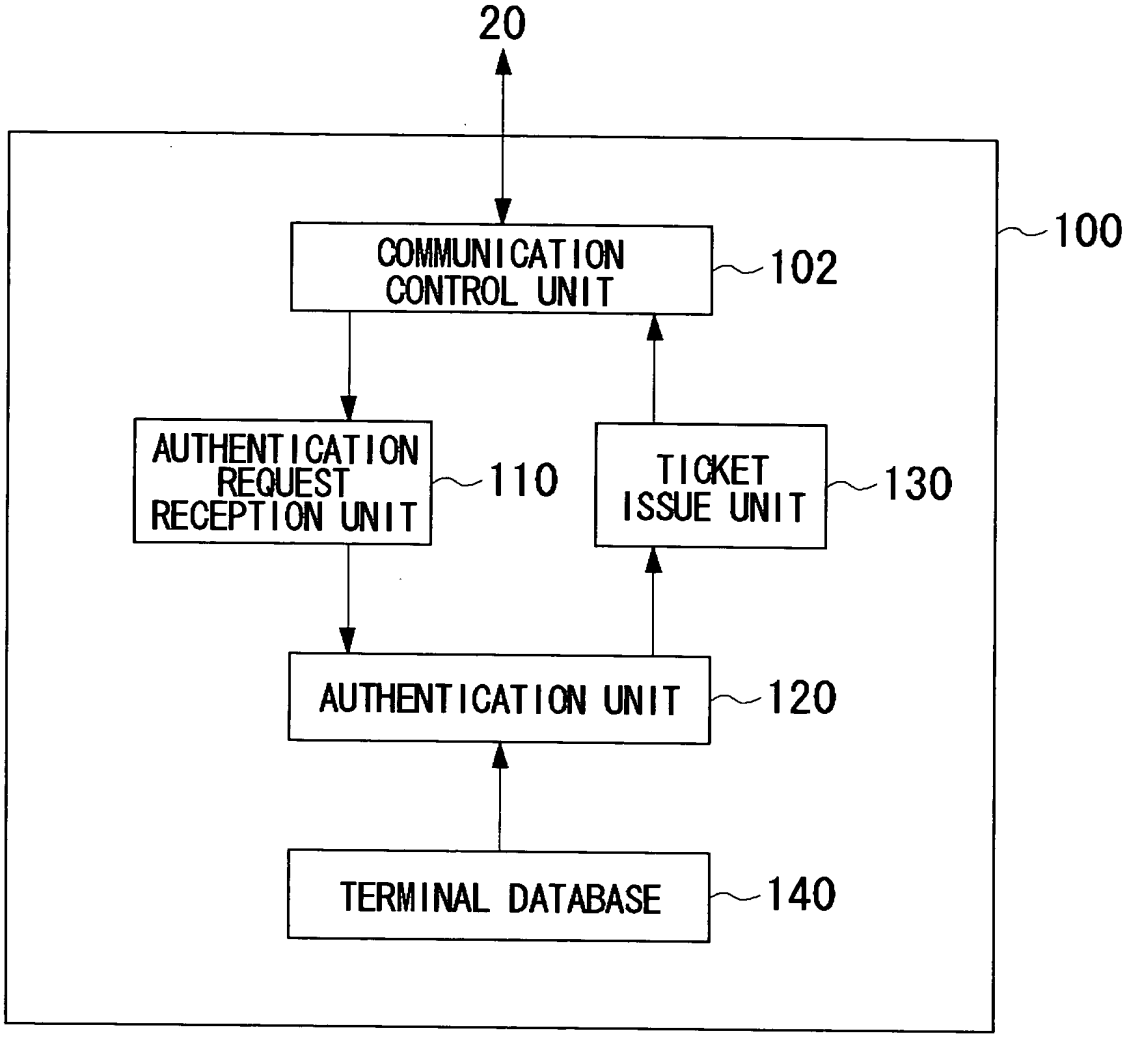

20
100
COMMUNICATION CONTROL UNIT
102
AUTHENTICATION REQUEST RECEPTION UNIT
110
TICKET ISSUE UNIT
130
AUTHENTICATION UNIT
120
TERMINAL DATABASE
140

FIG.6

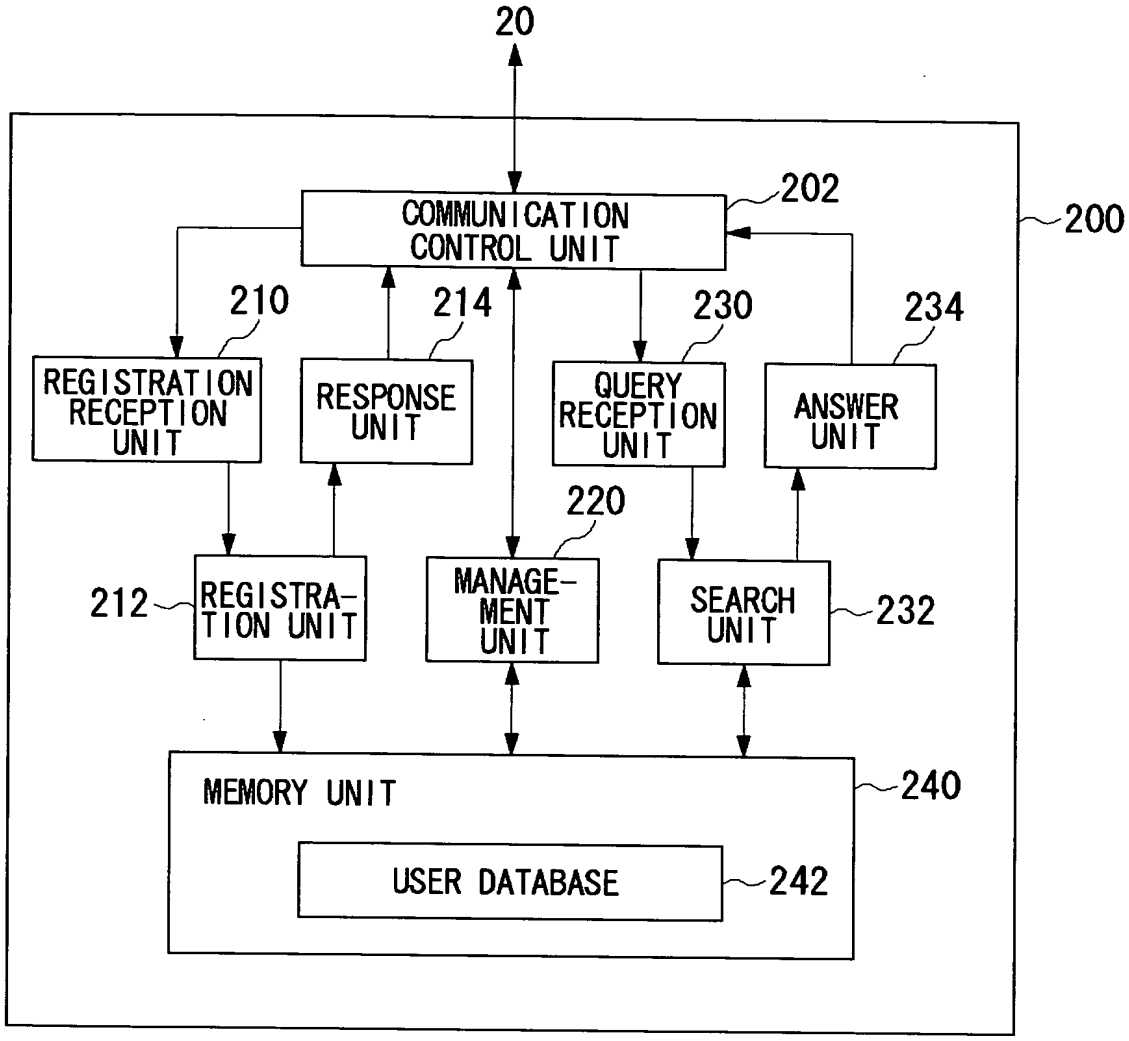

20
200
COMMUNICATION CONTROL UNIT
202
210
214
230
234
REGISTRATION RECEPTION UNIT
RESPONSE UNIT
QUERY RECEPTION UNIT
ANSWER UNIT
220
212
REGISTRATION UNIT
MANAGEMENT UNIT
SEARCH UNIT
232
MEMORY UNIT
240
USER DATABASE
242

FIG.7

400 LOCATOR ID	402 IP ADDRESS	404 REGISTRATION TIME
0001	XXX. XXX. XXX. XXX	2003/01/01 09:52:15
0002	XXX. XXX. XXX. XXX	2003/01/01 10:12:52
:	:	:

242

FIG.8

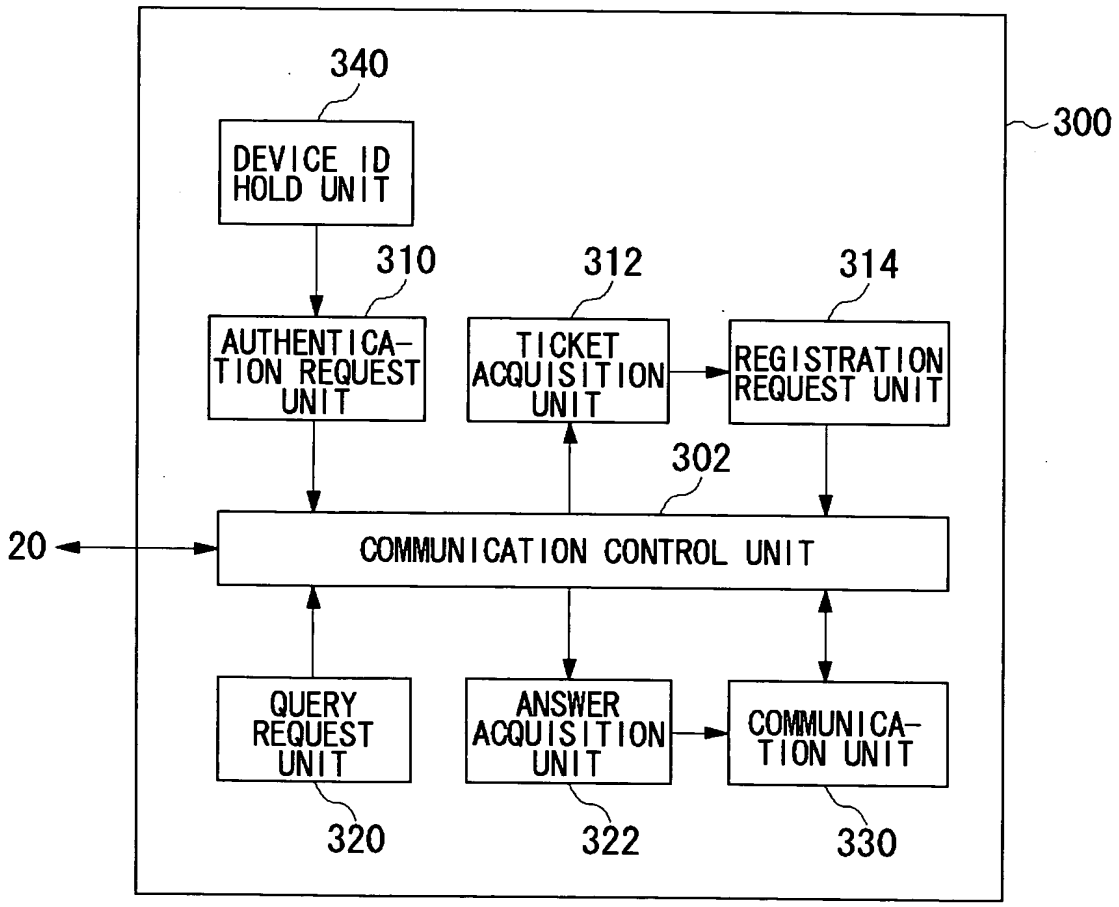


FIG.9

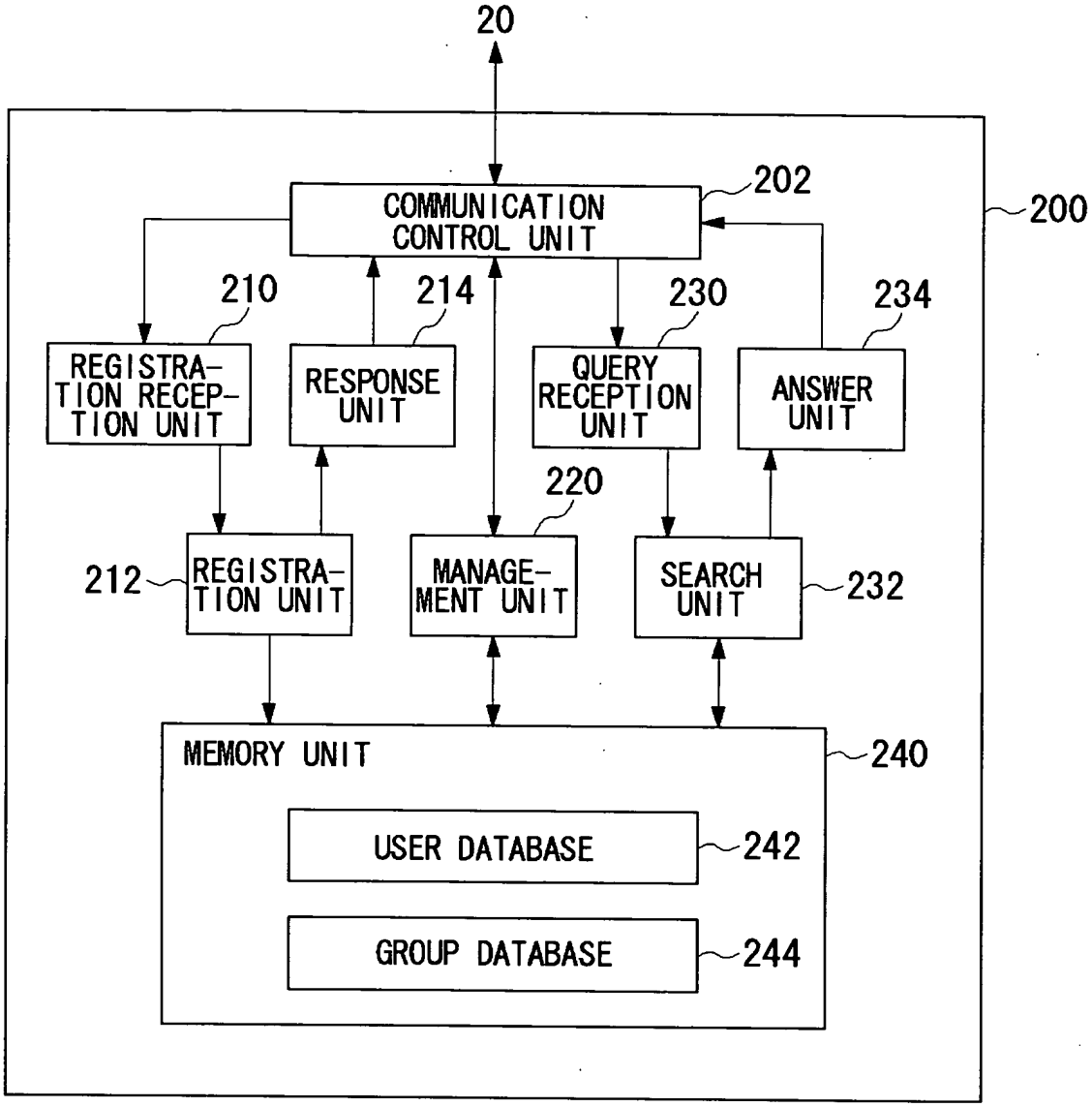
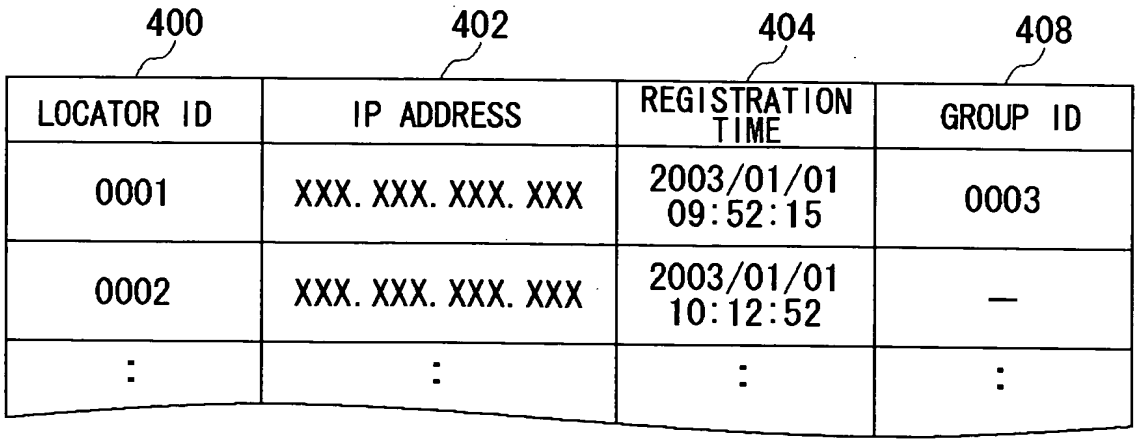

20
200
COMMUNICATION CONTROL UNIT
202
210
214
230
234
REGISTRATION RECEPTION UNIT
RESPONSE UNIT
QUERY RECEPTION UNIT
ANSWER UNIT
220
212
REGISTRATION UNIT
MANAGEMENT UNIT
SEARCH UNIT
232
MEMORY UNIT
240
USER DATABASE
242
GROUP DATABASE
244

FIG.10



400 LOCATOR ID	402 IP ADDRESS	404 REGISTRATION TIME	408 GROUP ID
0001	XXX. XXX. XXX. XXX	2003/01/01 09:52:15	0003
0002	XXX. XXX. XXX. XXX	2003/01/01 10:12:52	—
:	:	:	:

242

FIG.11

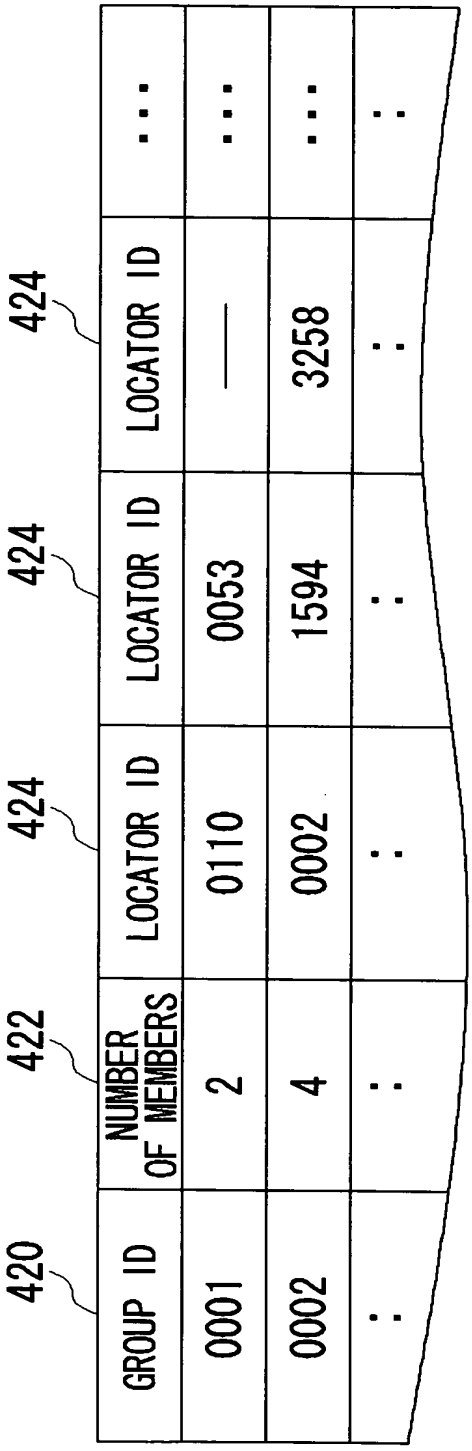

420
GROUP ID
0001
0002
422
NUMBER OF MEMBERS
2
4
424
LOCATOR ID
0110
0002
424
LOCATOR ID
0053
1594
424
LOCATOR ID
—
3258
244

FIG.12

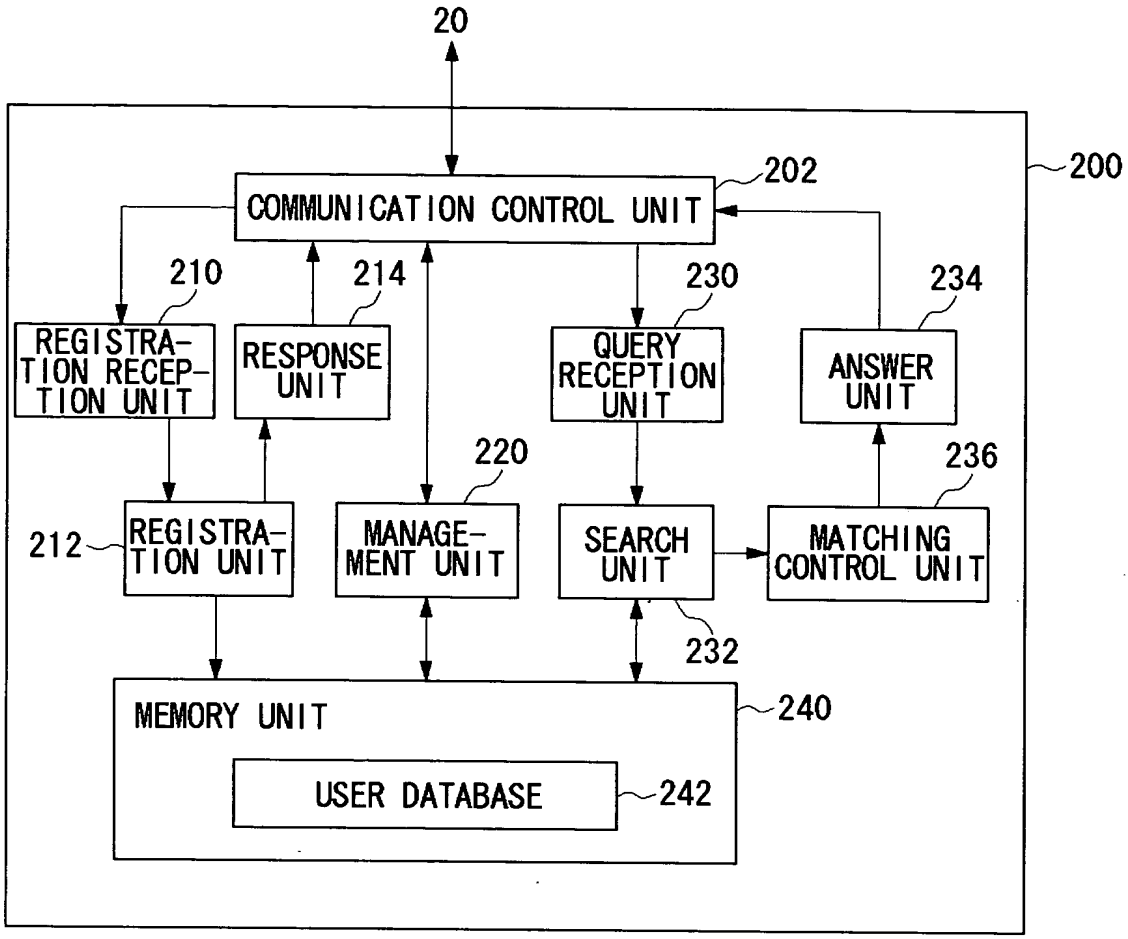
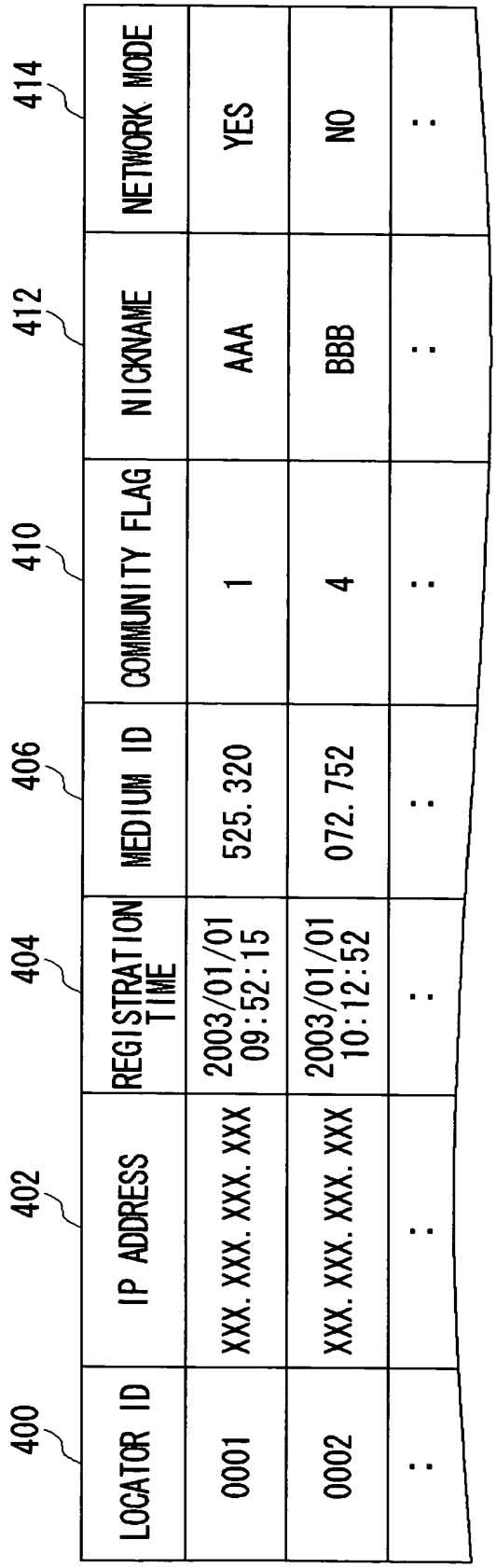

20
200
202
COMMUNICATION CONTROL UNIT
210
214
230
234
REGISTRA-TION RECEP-TION UNIT
RESPONSE UNIT
QUERY RECEPTION UNIT
ANSWER UNIT
220
236
212
REGISTRA-TION UNIT
MANAGE-MENT UNIT
SEARCH UNIT
MATCHING CONTROL UNIT
232
MEMORY UNIT
240
USER DATABASE
242

FIG.13


400
LOCATOR ID
0001
0002
:
402
IP ADDRESS
XXX. XXX. XXX. XXX
XXX. XXX. XXX. XXX
:
404
REGISTRATION TIME
2003/01/01 09:52:15
2003/01/01 10:12:52
:
406
MEDIUM ID
525. 320
072. 752
:
410
COMMUNITY FLAG
1
4
:
412
NICKNAME
AAA
BBB
:
414
NETWORK MODE
YES
NO
:
242